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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,553	12/05/2003	Kyung-Su Chae	041993-5350	7982

30827 7590 02/16/2006

MCKENNA LONG & ALDRIDGE LLP  
1900 K STREET, NW  
WASHINGTON, DC 20006

EXAMINER
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TRAN, KHOI H

ART UNIT	PAPER NUMBER
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3651

DATE MAILED: 02/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/727,553

Applicant(s)

CHAE ET AL.

Examiner

Khoi H. Tran

Art Unit

3651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 7-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

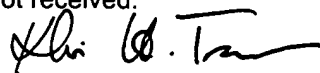
## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 August 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

  
KHOI H. TRAN  
PRIMARY EXAMINER

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 08/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election without traverse of Species I, claims 1-6, in the reply filed on 12/20/2005 is acknowledged.

**Drawings**

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. The "position detecting sensor to detect a position of the auto guided vehicle" must be shown or the feature canceled from claim 5.

Figure 1 (Replacement sheet) is objected to for adding new matter into the disclosure. The original disclosure is silent as to the sensor, located on the process stage, being "bar code reader" as amended.

No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 4, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Poinelli 5,163, 802 in view of Iwasaki et al. 6,129,496.

In regards to claims 1 and 2, Poinelli '802 discloses an auto-guided vehicle (AGV) having a barcode reader 19 for transporting wafer cassettes based on the read information from the cassette barcodes. The AGV comprises a robot arm (Figure 1) for loading/unloading the wafer cassettes. However, Poinelli '802 is silent as to the specifics of utilizing the vehicle in a wafer processing environment that includes moving paths connecting cassette stockers and processing stations.

Iwasaki et al. '496 disclose a commonly well-known substrate processing system that includes processing stations, cassette stockers, and moving paths. Iwasaki et al. '496 teach that AGV's are provided within the system to move wafer cassettes among the stockers and processing stations. Iwasaki et al. '496 teach that the processing

Art Unit: 3651

stage is provided with sensor to detect processed cassette. Iwasaki et al. '496 teach that providing a rail system for guiding auto-guided vehicle is commonly known (column 14, line 66).

It would have been obvious for a person with ordinary skill in the art, at the time the invention was made, to have utilized Poinelli '802 AGV within the commonly well-known wafer processing system, as shown by Iwasaki et al. '496, because it facilitates the transportation of wafer cassettes among stockers and processing stations via a network of moving paths.

In regards to claim 4, It would have been obvious for a person with ordinary skill in the art, at the time the invention was made, to have provided sensor(s) to Poinelli '802 modified system because it facilitates the detection of processed cassette, as taught by Iwasaki et al. '496.

In regards to claim 6, It would have been obvious for a person with ordinary skill in the art, at the time the invention was made, to have provided well-known guide rail system to Poinelli '802 modified system because it facilitates the guiding of AGV, as shown by Iwasaki et al. '496.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Poinelli 5,163,802 in view of Iwasaki et al. 6,129,496 as applied to claim 1 above, and further in view of Bonora et al. 5,570,990.

Poinelli '802 modified system discloses all elements per claimed invention as explained above. However, Poinelli '802 barcode reader is located on the AGV instead of being attached to the robot arm.

Bonora et al. '990 disclose of wafer handling vehicle having a robot arm with a communication means 239 located thereon for reading a code on the cassette wafer. When the robot arm handles the cassette, the reader on the arm read the code on the cassette for tracking purposes.

It would have been obvious for a person with ordinary skill in the art, at the time the invention was made, to have placed Poinelli '802 barcode reader onto the robot arm because it facilitates the reading of the cassette code as the cassette is being handled by the arm, as taught by Bonora et al. '990.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Poinelli 5,163,802 in view of Iwasaki et al. 6,129,496 as applied to claim 1 above, and further in view of Markin et al. 5,510,984.

Poinelli '802 modified system discloses all elements per claimed invention as explained above. However, it is silent as to the specifics of the position sensor to detect a position of the AGV.

Markin et al. '984 disclose a guidance and tracking system for AGV 's. Markin '984 teaches that it is commonly well known to provide sensors for detecting the position of the AGV's for tracking purposes.

It would have been obvious for a person with ordinary skill in the art, at the time the invention was made, to have provided the commonly well-known detecting sensors to Iwasaki '496 modified system because they facilitate the tracking of mobile AGV 's, as taught by Markin et al. '984.

7. Claims 1, 2, 4, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki et al. 6,129,496 in view of Poinelli 5,163, 802.

Iwasaki et al. '496 disclose a substrate transfer system. The system comprises a cassette having a bar code. The system comprises a cassette stocker having a barcode reader for detecting a processed cassette. The system comprises a plurality of process stages at which processes are conducted on a substrate. The system comprises sensor for sensing processed cassette at the process station/stage. The system comprises an auto-guided vehicle (AGV) being able to transfer the cassette via a robot arm among the stockers and process stations/stages. The system comprises a host to automatically control the cassette stoker, the auto guided vehicle, and the process stages. The auto guided vehicle is capable of being guided by a track/rail system. However, Iwasaki et al. '496 is silent as to the specific of the AGV having a barcode reader.

Poinelli '802 discloses of an AGV having a robot arm with a barcode reader located thereon for reading a code on the cassette wafer. Control commands for transporting and verifying the cassette are determined upon the read information.

It would have been obvious for a person with ordinary skill in the art, at the time the invention was made, to have provided to Iwasaki et al. '496 AGV with a barcode reader for reading the barcode on the cassette because it facilitates the transportation and verification of the cassette while it is being handled by the AGV, as taught by Poinelli '802.

8. Claims 1-4, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki et al. 6,129,496 in view of Bonora et al. 5,570,990.

Iwasaki et al. '496 disclose all elements per claimed invention as explained above. However, it is silent as to the specific of the robot arm located on the AGV having a barcode reader.

Bonora et al. '990 disclose of wafer handling vehicle having a robot arm with a communication means 239 located thereon for reading a code on the cassette wafer. When the robot arm handles the cassette, the reader on the arm read the code on the cassette for tracking purposes.

It would have been obvious for a person with ordinary skill in the art, at the time the invention was made, to have provided to Iwasaki et al. '496 robot arm with a reader for reading the barcode on the cassette, as shown by Bonora et al. '990, because it facilitates the tracking of the cassette, while it is being handled by the AGV.

9. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki et al. 6,129,496 in view of Poinelli 5,163, 802 or in view of Bonora et al. 5,570,990 as applied to claim 1 above, and further in view of Markin et al. 5,510,984

Iwasaki et al. '496 modified system discloses all elements per claimed invention as explained above. However, it is silent as to the specifics of the position sensor to detect a position of the AGV.

Markin et al. '984 discloses a guidance and tracking system for AGV 's. Markin '984 teaches that it is commonly well known to provide sensors for detecting the position of the AGV's for tracking purposes.

It would have been obvious for a person with ordinary skill in the art, at the time the invention was made, to have provided the commonly well known detecting sensors to Iwasaki et al. '496 modified system because they facilitate the tracking of mobile AGV's, as taught by Markin et al. '984.

### ***Response to Arguments***

10. Applicant's arguments filed 08/29/2005 have been fully considered but they are not persuasive.

Applicant argued that Poinelli 5,163,802 does not teach that the auto-guided vehicle capable of transfers the cassette to a process stage within the substrate transfer system. This argument has not been found to be persuasive. According to the present claim language, there is no structural difference between Applicant's claimed auto guided vehicle (AGV) and that of Poinelli '802. Hence, it is obvious that Poinelli '802 AGV is capable of transporting cassette to a process stage within a commonly well-known substrate transfer system, as shown by Iwasaki et al. 6,129,496.

### ***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

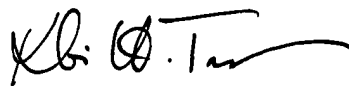
Art Unit: 3651

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khoi H. Tran whose telephone number is (571) 272-6919. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Crawford can be reached on (571) 272-6911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Khoi H Tran  
Primary Examiner  
Art Unit 3651

KHT  
02/13/2006